

REMARKS/ARGUMENTS

The present application has been reviewed in light of the Final Office Action dated April 26, 2010 and the Advisory Action dated July 7, 2010. Claims 1-28, 30-34 and 36-38 are currently pending, of which claims 26 and 33 are amended herein. Claims 1-25 have been previously withdrawn from consideration and claims 29 and 35 have been previously cancelled. Applicant respectfully requests early and favorable reconsideration of this application in light of the amendments above and the remarks that follow.

Claims 26-28 and 33 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,866,301 to “Brockway et al.”¹ in view of U.S. Patent No. 5,738,359 to Gundy (hereinafter “Gundy”). Applicant respectfully submits that independent claims 26 and 33, as amended herein are allowable over Brockway ‘301 in view of Gundy because the subject matter of each of claims 26-28 and 33 as a whole are non-obvious over Brockway ‘301 in view of Gundy.

To support an obviousness rejection, MPEP § 2143.03 requires “all words of a claim to be considered” and MPEP § 2141.02 requires consideration of the claim and “prior art as a whole.” The Board of Patent Appeal and Interferences has confirmed that a proper, post-KSR obviousness determination requires a “comparison of the claimed invention – including all its

¹ Applicant notes that Brockway is the sole inventor listed on U.S. Patent No. 6,866,301, as opposed to U.S. Patent No. 6,152,455 previously cited by the Examiner, which lists additional inventors. Applicant presumes that any reference made in the final Office Action mailed April 26, 2010 to “Brockway et al.” should be treated as a reference to U.S. Patent No. 6,866,301 (hereinafter “Brockway ‘301”).

limitations – with the teaching of the prior art.” *In re Wada and Murphy*, Appeal 2007-3733, citing *In re Ochiai*, 71 F.3d 1565, 1572 (Fed. Cir. 1995) and *CFMT v. Yieldup Intern. Corp.*, 349 F.3d 1333, 1342 (Fed. Cir. 2003).

Independent claims 26 and 33 each recite an expandable joining member including, *inter alia*, an “annular body” and “at least one locking tab” extending “tangentially” therefrom. The joining member may be arranged in a first position wherein “the second side terminal edge overlaps the first side terminal edge such that the [an] outer surface of the at least one locking tab lies against an inner surface of the annular body.” Additionally, claims 26 and 33 recite that the joining member may be arranged in a second position wherein “the annular body has a second diameter which is larger than the first diameter,” and wherein “the outer surface of the at least one locking tab slides over and across the openings of the at least one array of openings to permit the annular body to move to the second position when a radially outward force is applied to the inner surface of the annular body portion.”

In an embodiment of the present application, as depicted in FIG. 1 below for example, a joining member 200 includes an annular body portion 202. Locking tabs 220 extend tangentially from an outer surface of the annular body portion 202. The locking tabs 220 extend in a direction generally tangential to the curvature defined by the annular body portion 202.

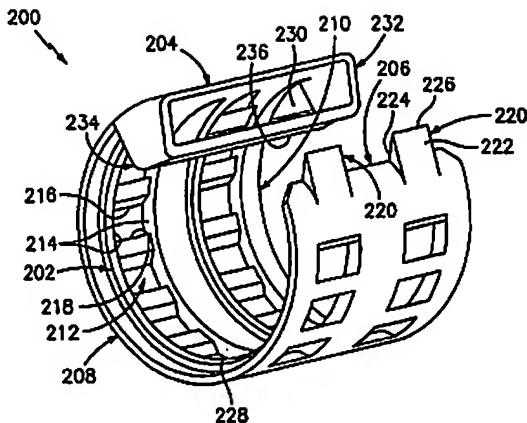


FIG. 1

As described in paragraphs [0051] and [0052] of Applicant's specification, locking tabs 220 overlap an inner surface of the annular body portion 202 when the joining member 200 is arranged in the first position. Since the locking tabs 220 extend "tangentially" from the annular body portion 202, an outer surface 222 of the locking tabs 220 may slide smoothly over the inner surface of the annular body portion 202 and "over and across" openings 212 when outward radial forces are applied (see paragraph [0071] of Applicant's specification) to transition the joining member 200 from the first position to the second position. Since the locking tabs 220 slide against the inner surface of the annular body portion 202, and "over and across" the openings 212, the outer surface of the annular body portion 202, which engages body vessels such as the bladder "B" and urethra "U" is permitted to transition smoothly as the joining member 200 moves from the first position to the second position.

In contrast to claims 26 and 33, Brockway '301 discloses an expandable band 10 for securing a sealing element 2 inside a structure 4 such as a pipe or manhole as depicted in FIG. 9

reproduced below. The expandable band 10 includes a locking member 24 having a tab 26 on a second band end portion 16 for engaging slots 22 disposed in a first band end portion 14.

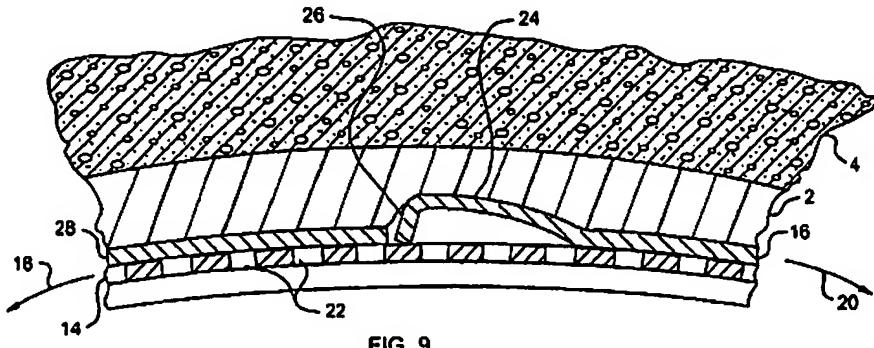


FIG. 9

The first and second band end portions 14, 16 overlap one another such that the locking member 24 is disposed against an outer surface of the band 10, rather than the "inner surface" recited in claims 26 and 33. Thus, as the band 10 is expanded, the deformability of the sealing member 2 must be invoked to allow the tab 26 to be disengaged from the slots 22 (see col. 5, lines 16-22). In use in a surgical setting, this reliance on the deformability of the surrounding material could be damaging to body vessels such as the bladder "B" and urethra "U." Moreover, the tab 26 has a tendency to engage each of the slots 22 as the band 10 is expanded due to the resiliency of the sealing member 2 (see col. 5, lines 27-37). Rather than sliding smoothly "over and across" the slots 22, the tab 26 slides into and out of the slots 22. Thus, in operation, the band 10 expands with irregularities in pressure (provided by the sealing member 2) rather than transitioning smoothly like the joining member 200 of Applicant's specification.

Gundy fails to remedy the deficiencies of Brockway '301 with respect to claims 26 and 33. Gundy describes an expandable band 10 as depicted in FIG. 6 reproduced below.

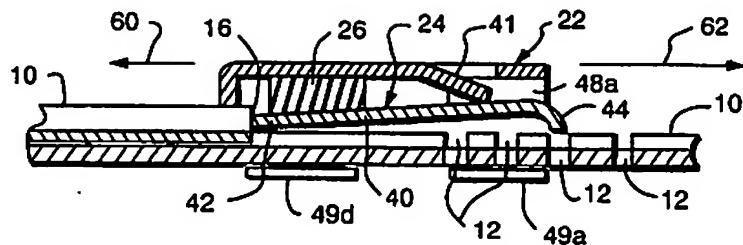


FIG. 6

The band 10 includes a locking member 24 including a locking tab 44, which is biased into lock notches 12 by a biasing member 26 (see col. 4, lines 19-27). Thus, the locking tab 44 engages, and consequently must disengage, each of the lock notches 12 as the expandable band 10 expands and the locking member 24 moves in the direction of arrow 60. Rather than sliding smoothly “over and across” the notches 12, the tab 44 of Gundy is biased into and out of the notches 12 similarly to the tab 26 of Brockway ‘301. Moreover, tab 44 of Gundy is disposed against and acts along an outer surface of band 10 as opposed to the “inner surface” recited in claims 26 and 33.

Additionally, Applicant submits that Brockway '301 in view of Gundy fails to render obvious claims 26 and 33, as these references fail to disclose, teach or suggest the following recitation:

a pair of guide rails extending radially inward from an inner surface of the annular body portion, at least one of the pair of guide rails being spaced a longitudinal distance from each of the proximal and distal terminal edges and extending circumferentially a substantial length of the at least one annular array of openings such that the at least one locking tab is slidably received between the pair of guide rails. (Emphasis added).

In contrast, as seen in FIG. 5 of Gundy (reproduced below), while tab 44 is shown disposed between side members 15a, 15b, Applicant submits that Gundy merely illustrates that side members 15a, 15b extend "radially outward" and not radially inward, as called for in each of independent claims 26 and 33.

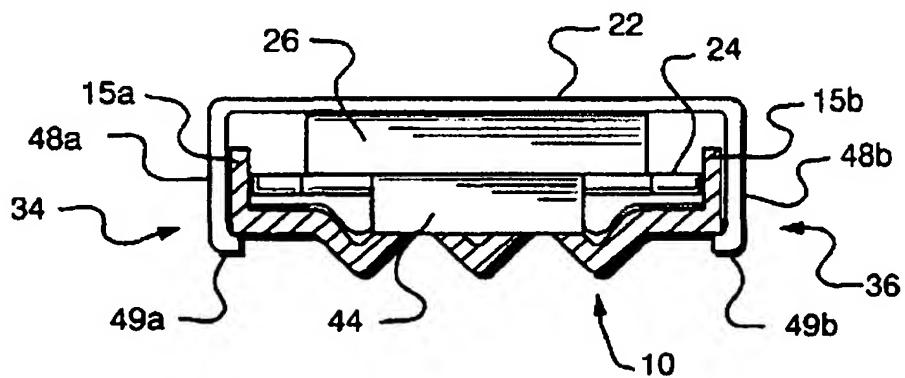


FIG. 5

Additionally, Applicant submits that any radial expansion of the respective bands of Brockway '301 and Gundy would tend to make their respective tabs engage more securely and thus prevent the ends of the band from sliding with respect to one another.

Further, Applicant submits that the tabs of Brockway '301 and Gundy are biased radially into the notches of the band. Accordingly, Applicant submits that any adjustment of the band to a radially larger diameter would require a good deal of effort and thus would render any adjustment of the bands difficult.

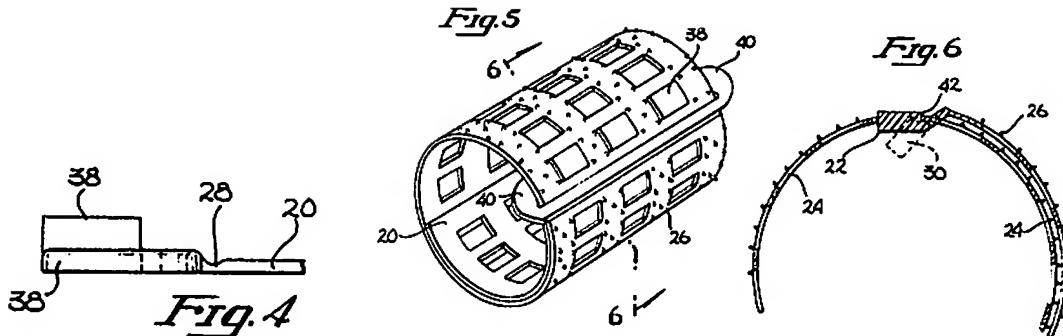
In view of the foregoing, Applicant respectfully submits that Brockway '301 in view of Gundy fails to disclose an annular body having a locking tab extending "tangentially" from a first side terminal edge thereof such that an "outer surface of the . . . locking tab lies against an inner surface of the annular body" and slides "over and across" an array of openings as the annular body expands from a first position to a second position. Accordingly, Applicant respectfully submits that independent claims 26 and 33 are allowable over Brockway '301 in view of Gundy under 35 U.S.C. § 103(a), and that the rejection of claims 26 and 33 thereto should be withdrawn.

As claims 27-28 depend, directly or indirectly, from independent claim 26, and include all the features of claim 26, Applicant respectfully submits that the subject matter of each of claims 27-28, as a whole, are also allowable under 35 U.S.C. § 103(a) over Brockway '301 in view of Gundy. Accordingly, the rejection of claims 27-28 thereunder should be withdrawn.

Claims 26-28 and 30-32 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 3,683,940 to Debue (hereinafter “Debue”) in view of Brockway ‘301. Applicant respectfully submits that independent claim 26, as amended herein is allowable over Debue in view of Brockway ‘301 because the subject matter of each of claims 26-28 and 30-32 as a whole are non-obvious over Debue in view of Brockway ‘301.

According to the Examiner, although Debue fails to teach a pair of “guide rails” in accordance with claim 26, Debue teaches the subject matter of claim 26 including a “locking tab extending tangentially from the first side terminal edge” (see page 4 of the Office Action). Applicant respectfully submits, however that Debue does not teach a locking tab “including an outer surface extending tangentially from an outer surface of the annular body portion” wherein the outer surface of the locking tab “slides over and across the openings of the at least one array of openings to permit the annular body to expand from the first diameter to the second diameter when a radially outward force is applied to the inner surface of the annular body portion” in accordance with claim 26.

Rather, Debue discloses the hair curler depicted FIGS. 4-6 reproduced below. The hair curler includes a locking member 22 having projections 38 for engaging holes 24. The projections 38 extend from a forward member 30, which is pivotally coupled to a rectangular section 20 by a line of reduced stiffness 28.



The forward member 30 must be pivoted out of the holes 24 (as depicted in phantom in FIG. 6 above) to permit adjustment of the hair curler. The elasticity of the hair curler “encourages the protrusions [38] on the locking member [22] toward the holes [24] in the rectangular section [20] so that the hair curler is self locking” (col. 2, lines 54-57). Since the line of reduced stiffness “tends to urge protrusions 38 into holes 24” (col. 4, lines 1-2), Applicant respectfully submits that that the projections 38 do not slide “over and across” the holes 24 “when a radially outward force is applied to the inner surface” of the hair curler in accordance with claim 26.

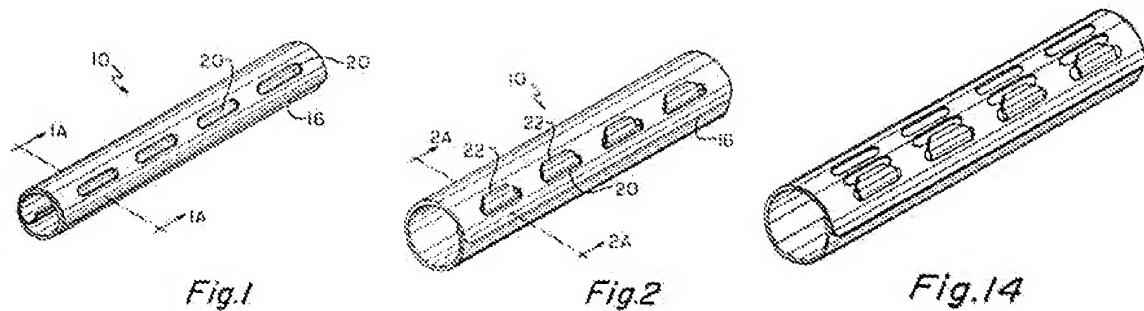
Since Brockway ‘301 also fails to disclose a locking tab that slides “over and across” an array of openings in accordance with claim 26 as discussed above, Applicant respectfully submits that claim 26 is allowable over Debeu in view of Brockway ‘301 under 35 U.S.C. § 103(a), and that the rejection of claim 26 thereto should be withdrawn. As claims 27-28 and 30-32 depend, directly or indirectly, from independent claim 26, and include all the features of claim 26, Applicant respectfully submits that claims 27-28 and 30-32 are also allowable under 35

U.S.C. § 103(a) over Debue in view of Brockway '301. Accordingly, the rejection of claims 27-28 and 30-32 thereunder should be withdrawn.

Claims 26-28, 33, 34 and 36 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,984,963 to Ryan et al. (hereinafter "Ryan") in view of Brockway '301. Applicant respectfully submits that independent claims 26 and 33, as amended herein, are allowable over Ryan in view of Brockway '301 because the subject matter of each of claims 26-28, 33, 34 and 36 as a whole is non-obvious over Ryan in view of Brockway '301.

According to the Examiner, Ryan teaches the subject matter of claims 26-28, 33, 34 and 36, but fails to teach a pair of "guide rails" in accordance with independent claims 26 and 33. Applicant respectfully submits, however that Ryan does not teach a locking tab extending "tangentially" that slides "over and across" the openings of an array of openings to permit an annular body to expand in accordance with claims 26 and 33.

Rather, Ryan discloses the endovascular stents depicted in FIGS. 1-2 and 14 reproduced below. The stents include tabs 22 for engaging slots 20. As described at col. 7 lines 14-17: "When expanded from the configuration in FIG. 1, the tubular stent will unroll and define a progressively increasing diameter until the tabs 22 pop into and through the slots 20 as suggested in FIG. 2. Applicant submits that when the stent depicted in FIG. 14 is expanded, the tabs will "pop into and through" any of the intermediate slots rather than sliding "over and across" the slots in accordance with independent claims 26 and 33.



Since Brockway '301 also fails to disclose a locking tab that extends "tangentially" and slides "over and across" an array of openings in accordance with claims 26 and 33 as discussed above, Applicant respectfully submits that claims 26 and 33 are allowable over Ryan in view of Brockway '301 under 35 U.S.C. § 103(a), and that the rejection of claims 26 and 33 thereto should be withdrawn.

Additionally, Applicant submits that any proper combination of the teachings of Ryan and Brockway '301 fails to disclose the following recitation from each of independent claims 26 and 33:

a pair of guide rails extending radially inward from an inner surface of the annular body portion, at least one of the pair of guide rails being spaced a longitudinal distance from each of the proximal and distal terminal edges and extending circumferentially a substantial length of the at least one annular array of openings such that the at least one locking tab is slidably received between the pair of guide rails. (Emphasis added).

As claims 27-28, 34 and 36 depend, directly or indirectly, from independent claims 26 and 33, and include all the features of claims 26 and 33, Applicant respectfully submits that claims 27-28, 34 and 36 are also allowable under 35 U.S.C. § 103(a) over Ryan in view of

Brockway '301. Accordingly, the rejection of claims 27-28, 34 and 36 thereunder should be withdrawn.

Claims 37 and 38 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ryan in view Brockway '301 and in further view of U.S. Patent No. 6,048,360 to Khosravi et al. (hereinafter Khosravi). Applicant submits that claims 37 and 38 are allowable under 35 U.S.C. § 103(a) over Ryan in view of Brockway '301 and Khosravi.

The Examiner relies on Khosravi for the disclosure of a coiled sheet graft stent constructed from an alloy having shape memory characteristics. Applicant submits that even if Khosravi does disclose a shape memory alloy, Khosravi fails to cure the deficiencies of Ryan in view of Brockway '301 in that Khosravi does not disclose a locking tab that extends "tangentially" and slides "over and across" an array of openings in accordance with independent claim 33.

Khosravi discloses a graft stent 20 as depicted in FIGS. 1 and 3 reproduced below. The graft stent 20 includes teeth 25 for engaging openings 24. As described at col. 6, lines 17-19, the teeth 25 lock the graft stent 20 "as described in the incorporated Sigwart [U.S. Patent No. 5,443,500] and Derbyshire [U.S. Patent No. 5,007,926] patents."

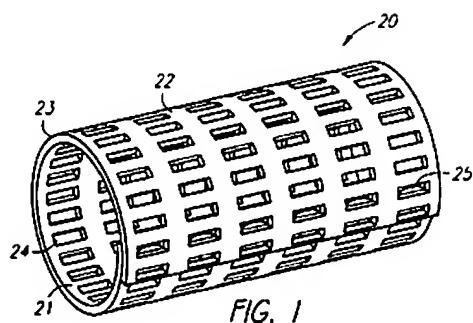


FIG. 1

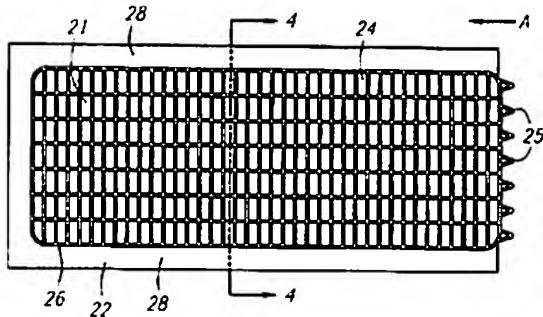
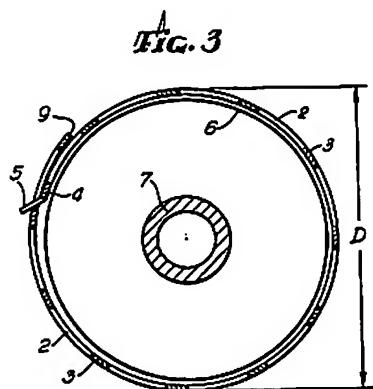


FIG. 3

From Khosravi

The devices discussed in the incorporated Sigwart and Derbyshire patents include teeth that are bent radially outwardly to engage respective openings. As depicted in the Figures reproduced below, the teeth (5 in Sigwart, unlabeled in Derbyshire) are bent in a non-tangential direction in order to engage the respective openings.



From Sigwart

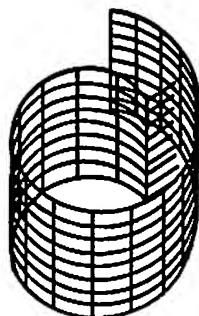


FIG. 1d

From Derbyshire

Applicant submits that the non-tangential teeth from Khosravi, Sigwart and Derbyshire will engage each of openings as the respective devices are expanded. Thus, Applicant submits

that Khosravi does not disclose a locking tab that extends “tangentially” and slides “over and across” an array of openings and fails to cure the deficiencies of independent claim 33, as amended herein.

Additionally, Applicant submits that any proper combination of the teachings of Ryan, Brockway ‘301 and Khosravi fails to disclose the following recitation of independent claim 33:

a pair of guide rails extending radially inward from an inner surface of the annular body portion, at least one of the pair of guide rails being spaced a longitudinal distance from each of the proximal and distal terminal edges and extending circumferentially a substantial length of the at least one annular array of openings such that the at least one locking tab is slidably received between the pair of guide rails. (Emphasis added).

Accordingly, in view of the foregoing, since Khosravi fails to cure the deficiencies of Ryan in view of Brockway ‘301, Applicant submits that the subject matter of each of claims 37 and 38, as a whole, are allowable under 35 U.S.C. § 103(a) over Ryan in view of Brockway ‘301 and Khosravi.

In view of the amendments made to the claims herein, and in view of the remarks and arguments presented above, it is respectfully submitted that each of the rejections raised by the Examiner in the present Office Action have been overcome. It is respectfully submitted that none of the references of record, considered individually or in any proper combination with one another, disclose or suggest the present invention as claimed.

Application Serial No. 10/518,040
Filing Date: December 9, 2004
Docket: 2842 (203-2731 PCT US)
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**Response to Office Action dated April 26, 2010
and Advisory Action dated July 7, 2010**

Should the Examiner believe that a telephone interview may facilitate prosecution of this application, the Examiner is respectfully requested to telephone Applicant's undersigned representative at the number indicated below.

In view of the foregoing amendments and remarks, reconsideration of the application and allowance of claims 26-28, 30-34 and 36-38 is earnestly solicited.

Respectfully submitted,



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